

REMARKS

Status of Claims

Claims 1-19 were pending. Claims 15-16 and 18 were withdrawn. Claims 1, 7, 11, and 17 have been amended. Claims 3 and 5 have been withdrawn. Claim 20 has been newly added. After entry of claim amendments, claims 1-20 are currently pending.

Claim 1 has been amended to recite “at least one sink comprising an area having projections substantially vertical to its surface, said projections configured to achieve a capillary flow and thereby support or control the flow rate of said liquid sample through said transport or incubation zone.” Support for this amendment may be found throughout the specification and at least on page 13, lines 21-30, of the specification as filed.

Claim 7 has been amended to recite “said at least one sink is adapted to respond to an external influence to regulate the flow rate of said liquid sample through said transport or incubation zone.” Claim 11 has been amended to remove multiple recitations of “or” and “and.” Claim 17 has been amended to recite “the method comprising adding said samples to the device of claim 1.” Support for these amendments may be found throughout the specification and claims as originally filed.

Newly added claim 20 is directed to the substantially vertical projections of the sink that can have configurations of height, diameter, or reciprocal spacing. Support for the newly added claim may be found throughout the specification, for example at least on page 10, lines 22-28, of the specification as filed.

Amendment and cancellation of certain claims is not to be construed as a dedication to the public of any of the subject matter of the claims as previously presented. No new matter is added, thus entry of the amendments is respectfully requested.

Election/Restriction

Applicants acknowledge that election of Group I has been made final. Applicants further acknowledge that claims 3, 5, 15, 16, and 18 have withdrawn from further consideration.

Claim Interpretation

Applicants acknowledge the Office's claim interpretation of claims 2 and 9. Applicants respectfully point out that MPEP § 2111 states that "claims must be given their broadest reasonable interpretation."

Claim Rejections Under 35 USC § 112, Second Paragraph

Claims 11 and 17 are rejected under 35 USC § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

To the extent the rejection applies to the amended claims, Applicants respectfully traverse the rejection and its supporting remarks.

Applicants respectfully point out that, as amended, claim 11 no longer recites the allegedly indefinite alternative expression having multiple recitations of "or" and "and." As amended, claim 11 recites the definite phrase "wherein said at least one flow path is selected from the group of flow paths consisting of a flow path formed as a capillary groove, a flow path formed as an open channel, a flow path formed as a closed capillary, a flow path formed as a tortuous path through a fibrous material, and a flow path formed as a tortuous path through a gel-like material." Therefore, withdrawal of the rejection is respectfully requested.

Applicants also respectfully point out that, as amended, claim 17 now includes a step in the method to clarify the allegedly unclear method encompassed by the claim. As amended, claim

17 now recites the defined step of “adding said samples to the device of claim 1.” Therefore, withdrawal of the rejection is respectfully requested.

Claim Rejections Under 35 USC § 101

Claim 17 is rejected under 35 USC § 101 because the allegedly claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 USC § 101.

Applicants respectfully point out that, as amended, claim 17 now recites a step in the claimed process. Thus, instant claim 17 now encompasses the proper definition of a process. Therefore, withdrawal of the rejection is respectfully requested.

Claim Rejections Under 35 USC §102

Regnier et al.

Claims 1, 2, 4, 6-14, 17 and 19 are rejected under 35 USC § 102(b) as allegedly being anticipated by Regnier et al., U.S. Patent No. 6,156,273 (hereinafter Regnier).

To the extent the rejection applies to the amended claims, Applicants respectfully traverse the rejection and its supporting remarks. As amended, claim 1 includes projections substantially vertical to the surface of the sink and configured to achieve capillary flow. Applicants respectfully assert that Regnier fails to anticipate instant claim 1 and all dependent claims therefrom, because Regnier does not teach projections substantially vertical to the surface of the sink and configured to achieve capillary flow.

MPEP 2131 states, “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” Regnier does not expressly or inherently teach the projections substantially vertical to the surface of the sink that are configured to achieve capillary flow of instant claim 1.

Regnier does not expressly teach projections substantially vertical to the surface of the sink and configured to achieve capillary flow. Regnier expressly teaches “interconnected channels defined by...support structures” (Abstract). However, Regnier also expressly teaches that the “apparatus includes a pump for pumping a mobile phase from a reservoir through the separation column... [or] includes an electrophoresis apparatus” (Col. 2, lines 44-48), as a means for generating flow through the channels. Thus Regnier expressly teaches flow through the interconnected channels by means other than capillary flow achieved by the support structures (i.e. substantially vertical projections).

Regnier also fails to inherently teach projections substantially vertical to the surface of the sink and configured to achieve capillary flow, because Regnier teaches alternative means for achieving sample flow. As mentioned above, flow can be achieved by an electrophoresis apparatus or a flow generating pump. Furthermore, MPEP 2112 makes clear that:

[t]o establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.

It would not be necessary for the interconnected channels defined by the support structures to generate capillary flow, because sample flow can be achieved by electrophoresis or a pump.

While not raised by the Examiner in the Office Action, Applicants note that Regnier also mentions the term “capillary.” However, Regnier mentions “capillary” in the context of capillary electrophoresis, which uses capillary tubes (Col. 1, lines 27-33). Applicants respectfully point out that capillary tubes do not contain structures such as substantially vertical projections configured to achieve capillary flow. Accordingly, the mention of “capillary” in Regnier does not read on the projection-based capillary flow of the present claims.

Given that Regnier does not expressly or inherently teach projections substantially vertical to the surface of the sink and configured to achieve capillary flow, Regnier does not

anticipate instant claim 1 or any claim dependent therefrom. Withdrawal of the rejection is respectfully requested.

Bhullar et al.

Claims 1, 2, 4, 6-14, 17 and 19 are rejected under 35 USC § 102(b) as allegedly being anticipated by Bhullar et al., U.S. Patent No. 6,451,264 (hereinafter Bhullar).

To the extent the rejection applies to the amended claims, Applicants respectfully traverse the rejection and its supporting remarks. As amended, claim 1 includes projections substantially vertical to the surface of the sink that are configured to achieve capillary flow. Applicants respectfully assert that Bhullar fails to anticipate instant claim 1 and all dependent claims therefrom, because Bhullar does not teach projections substantially vertical to the surface of the sink and configured to achieve capillary flow.

As was the case with Regnier, Bhullar does not expressly teach projections substantially vertical to the surface of the sink and configured to achieve capillary flow. Rather, Bhullar expressly teaches a capillary flow pathway defined by inner and outer walls fixed to the base of the apparatus and a lid that extends from the inner wall to the outer wall to cover the capillary pathway (Col. 2, lines 9-12). Bhullar also expressly teaches that the “capillary pathway includes one or more groups of microstructures fixed to the base within...the pathway” (Col. 3, lines 13-15). However, Bhullar makes clear that the “grouped microstructures are spaced from each other...by less than a first distance that is less than that necessary to achieve capillary flow of liquid” (Col. 3, lines 26-29). Thus, Bhullar expressly teaches capillary flow through the capillary pathway by means other than the microstructures (i.e. substantially vertical projections).

Like Regnier, Bhullar also fails to inherently teach projections substantially vertical to the surface of the sink and configured to achieve capillary flow, because Bhullar teaches an alternative means for achieving capillary flow. Capillary flow can be achieved by the capillary pathway itself. As discussed above for Regnier, any inherent matter must necessarily be present.

Bhullar teaches that it is the capillary pathway defined by the walls and lid of the apparatus (Col. 2, lines 9-12), and not the microstructures (Col. 3, lines 26-29), that generates capillary flow. It would therefore not be necessary for the microstructures to provide capillary flow in the apparatus, because the capillary pathways themselves are designed to generate capillary flow.

Given that Bhullar does not expressly or inherently teach projections substantially vertical to the surface of the sink and configured to achieve capillary flow, Bhullar does not anticipate instant claim 1 or any dependent claim therefrom. Therefore, withdrawal of the rejection is respectfully requested.

Ohman et al.

Claims 1, 6-14, 17 and 19 are rejected under 35 USC § 102(b) as allegedly being anticipated by Ohman et al., IDS: WO 3103835 (hereinafter Ohman).

To the extent the rejection applies to the amended claims, Applicants respectfully traverse the rejection and its supporting remarks. Applicants respectfully assert that Ohman is not available as a 102(b) reference.

35 USC § 102(b) states, “[a] person shall be entitled to a patent unless...the invention was patented or described in a printed publication in this or a foreign country...*more than one year prior* to the date of application for patent in the United States (emphasis added).” The instant application claims a foreign application priority date of June 2, 2004. However, Ohman has a publication date of December 18, 2003, which is less than a year prior to the effective filing date of the instant application. Therefore, Ohman is not available as a 35 USC § 102(b) reference.

Furthermore, Ohman is not available as a 35 USC § 102(a) or a 102(e) reference.

35 USC § 102(a) states that, “[a] person shall be entitled to a patent unless...the invention was known or used *by others* (emphasis added).” Ohman names Per Ove Ohman and Ib Mendel-Hartvig as the inventors, which are the same two inventors named in the instant application.

Since Ohman does not disclose an invention by others, Ohman is not available as a 102(a) reference.

Similarly, 35 USC § 102(e) states, “[a] person shall be entitled to a patent unless...the invention was described in - (1) an application for patent, published under section 122(b), *by another* (emphasis added).” As noted above, Ohman names the same two inventors as the instant application. Therefore, Ohman is not an invention by another, and does not qualify as a 102(e) reference.

Given that Ohman is not available as a 102(b) reference, Ohman does not anticipate claim 1 or any dependent claim therefrom. Therefore, withdrawal of the rejection is respectfully requested.

Claim Rejections Under 35 USC §103

Claims 2 and 4 are rejected under 35 USC § 103(a) as allegedly being unpatentable over Ohman.

To the extent the rejection applies to the amended claims, Applicants respectfully traverse the rejection and its supporting remarks. Applicants respectfully assert that Ohman is not available as a 103(a) reference.

35 USC § 103(a) states, “[a] patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title...” As shown above, Ohman does not qualify as a 102(b) reference, and is therefore not available for use in a 103(a) rejection. Withdrawal of the rejection is respectfully requested.

CONCLUSION

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark Office determines that an extension and/or other relief is required, Applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing **Docket No. 514862002600**. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

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Respectfully submitted,

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